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ABSTRACT

Children in five second grade classrooms were exposed to an educational intervention designed to facilitate their moral development. Compared to a control group, they showed statistically significant growth in the following variables: role taking, intentionality, positive justice, punishment and donating behavior. Correlational analyses revealed that, initially, only 4 of 28 non-redundant interrelationships of variables were significant; however, after educational intervention, 14 of the 28 correlations proved to be significant, indicating that this intervention appears to enhance and/or consolidate moral structure for this age group. IQ, age, sex, ordinal position, and peer popularity were also examined relative to morality. Analyses of variance revealed that one of the five groups had a significantly higher IQ than the others. Analysis of this group revealed that on most measures, their performances were not significantly statistically different from the other groups. (Author)

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MORAL DEVELOPMENT IN THE SECOND GRADE CLASSROOM: EDUCATIONAL INTERVENTION AND MENTAL STRUCTURE

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Moral Development in the Second Grade Classroom: Educational Intervention and Mental Structure

Piaget (1965) postulates the existence of two major stages in the moral development of the child, heteromony and autonomy. Kohlberg (1972) extends these two stages to six. Lickona's review of the literature (1976) indicates that at least nine subvariables are involved in the growth from heteromony to autonomy. Yet few experimental studies simultaneously study more than a few of these components of morality. Often an area as complex as morality is operationally defined as scores on a measure of intentionality. Rarer still is the study which assesses the impact of an educational intervention on these several components of morality.

Kohlberg, Selman and Lickona (1971) have collaborated on an educational intervention produced by Guidance Associates, entitled First Things: values. This intervention is designed to stimulate moral development in the elementary school age child through the twin processes of cognitive conflict and exposure to peer reasoning at higher levels of morality. Selman (1975) reports an increase in intentionality scores using this intervention technique in the second grade classroom.

The present research extends the work of Selman to include a more comprehensive view of morality in the second grade child. In addition to intentionality, children's judgments in the following areas were studied: Immanent justice, positive justice (Damon, 1975), punishment, role taking, and donating behavior which can be seen as a measure of pro social behavior.

The question of structure or consistency of response is one

that has intrigued many researchers. A study by Johnson (1962), and essentially replicated by Harris (1972), found low positive correlations among various Piagetian moral variables. Lickona (1976) asserts that these various components of morality are best conceived of as relatively distinct developmental dimensions rather than closely knit stages of moral thought. Most of the research on structure has been of a "static" nature and does not include assessment of children at transitional ages both before and after a developmentally appropriate educational intervention.

Certain demographic variables have been hypothesized as being related to moral development. Often, these variables are analyzed by correlational techniques, as was the case at one point in time with the "structure" question. Intellectual ability and age have been repeatedly shown to be related to moral maturity, (Abel, 1941; R. C. Johnson, 1962; Kohlberg, 1964; MacRae, 1954) while the literature on sex differences in morality has been mixed, with some studies showing no differences (Kreb, 1965; Whelan, 1977) and others showing differences (Hartshorne and May, 1928; Burton, 1971; and Feldman and Feldman, 1967).

In contrast to the large number of studies dealing with the effects of sex, age, and IQ on morality, the literature on effects of peer popularity and ordinal positional in family on moral development of children is sparser. Whelan (1977) found an ordinal position effect when investigating perceived parental response to children's moral judgments. The first born child expected more parental support for

moral judgments (even when counter to authority figures) than did latter born children.

Piaget suggests that peer interaction is a force which promotes moral development. It would seem that children who are popular with their peers would be more likely to have a greater amount of peer involvement than children who are less popular with their peers. Following Piaget's ideas concerning dynamics of growth from heteronomy to autonomy, the more popular child would then have more opportunity for moral and social growth. Krebs (1965) and Porteus and Johnson (1965) found no relation between measures of peer popularity and morality. Others, such as Keasey (1971) and Nass (1964) did find a positive relationship between peer interaction and moral maturity.

The specific questions investigated by this study were:

1. Do children who participate in this educational program show statistically significant growth in the areas of assessment both when compared to a control group and to themselves? Relatedly, are some components of morality more amenable to growth given this intervention?
2. What interrelationships exist among the various components of morality prior to and after this educational intervention? What "structure," if any, exists, and what is the effect of educational intervention on this structure?
3. How are certain demographic variables (SES, sex, IQ, age, ordinal position, peer popularity) related to the pre and post test measures? (Given a relatively homogeneous population)

Method

Subjects. The semi-rural public school district from which the sample was randomly drawn is located in southeastern Pennsylvania. Although this district is predominantly middle to upper middle class, one of the elementary schools was of significantly higher SES than the other elementary school ($r = .21$, $p = .03$). Three second grade classes from each of the district's two elementary schools chose to participate in this study. One of these classes served as the control group. Half of the children (equal number of boys and girls) were randomly chosen from each classroom to participate in the study. The IQ (Lorge Thorndike) of the group was above national average ($\bar{x} = 115$, $sd = 10$). Of the 72 children tested, all were Caucasians whose ages ranged from 79 to 103 months, with 88 months being the mean age.

Measures. In September, all children were individually administered the following measures either by the author or her research assista t, a senior undergraduate majoring in psychology.

1. Sociogram- If you could invite any 5 children from your class to your birthday party, whom would you invite?
2. Role taking

   Paradigm 1- Flavell's (1968) task involving the 7 card dog, tree and boy sequence.

   Paradigm 2- Olejnik's (1975) adaptation of a procedure used by Chandler and Greenspan (1972).
3. Absolutism of moral perspective-

   Lerner's (1937) story of Frank, the lazy school boy, as reported in Lickona (1976).

4. Positive justice- the school fair/art project part of the Damon (1975) interview.

5. Intentionality- Armsby's (1972) adaptation of three Piagetian stories as reported by Olejnik (1975).

6. Immanent Justice- Grinder's (1964) adaptation of three Piagetian stories.

7. Punishment- Three Piagetian stories adapted by Sicoli to establish a hierarchy of severity of punishment choices as is suggested by Piaget (1965).

8. Donating paradigm- The children were given 7 M&M's. They were told that they could keep them all or share some or all of the M&M's with some poor children that the examiner would meet later that day. The examiner stressed the fact that these poor children hardly ever received much candy.

The same measures were used again for post testing in late December. Testing took approximately 45 minutes per child.

Procedures. The participating second grade teachers were shown the introductory filmstrip designed by Kohlberg, Selman and Lickona at an in-service education meeting. This filmstrip is part of the First things: values program by Guidance Associates and introduces moral development stage theory, as well as providing a "modeling" experience for the teachers in that it presents an enactment of the program being used in a classroom. The experimenter then answered any questions the teachers had concerning either moral development theory or educational practice.

After initial testing, the children were exposed to the series

of 10 filmstrips, each of approximately 15 minutes duration, at a rate of 1 per week for approximately 10 weeks. These filmstrips consisted of five sets, each containing two filmstrips on a topic, and were entitled: But it isn't yours, The trouble with truth, You promised, What do you do about rules and That's no fair. The ten filmstrips depicted both children and adults engaged in open ended moral dilemmas relevant to the lives and experiences of elementary school age children. After showing the filmstrip, the teacher briefly clarified the moral dilemma for the children. The children then were assigned to small groups of about six to discuss the dilemma. Each group consisted of at least one child whose pre test scores were above average for that particular class as was suggested in the manual. In these groups, which were composed of the same children for each week's discussion (except absentees), they discussed the dilemma for approximately 10 minutes, at the end of which they reconvened for classroom group discussion monitored by their regular teachers. Often, the large group discussion consisted of each group giving its"best" reasoning on the dilemma. Sometimes the class took votes on which course of action the filmstrip characters should take. There was no adult intervention in these group discussions except that the teachers walked about the room and occasionally asked questions from the manual designed to elicit thoughtful response if the group appeared to be stalled on an issue, or was felt to be non-task oriented. Teachers generally alloted approximately 45 minutes per week to this educational intervention over a period of approximately three months.

The experimenter and her assistant were present at approximately one third of these classroom sessions to ascertain whether the research

was proceeding according the the recommendations of the authors of First things: values, as specified in the manual. In addition, they observed and recorded pupil and teacher interaction. Children's group interaction generally consisted of asserting their opinions on how the dilemmas should be resolved, questioning each other's ideas, giving reasons for and defending their opinions, and occasionally debating each other. In groups, there was some non-task oriented behavior, but it occurred mostly in the initial stages of the program. In general, the program seemed to hold their interest, and engage their thinking.

Teacher behavior that was observed and recorded generally consisted of clarifying and preserving the moral dilemma, asking relevant questions, encouraging children to give reasons for their opinions, keeping arguments and debates balanced, and managing the classroom during the various transition points in the program. Both pupil and teacher behavior seemed generally consistent with that specified in the First things: values manual, thus meeting the goal of using the program as it was recommended by its designers.

Results

Analysis of variance revealed that initially, the six classroom groups differed on three dimensions: IQ ($F = 5.99$, $p = .001$), combined role taking score ($F = 3.68$, $p = .001$), and punishment judgment ($t\ (65) = 2.97$, $p = .004$). One class had a mean IQ of 127, which was considerably higher than any of the other five groups. The control group scored higher than the experimental group on pre-test punishment judgment. The experimental groups differed among themselves on the combined role taking score. All other analyses of variance revealed

no statistically significant differences among the six classrooms at the beginning of the experiment.

After the intervention, The SPSS package program ANOVA-CONTRAST, which combines the experimental groups and then compares them to the control group, showed that the experimental groups proved to be statistically superior to the control group on the dimensions shown in table one.

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insert table 1 here

The variables on which the experimental group, as compared to the control group, did not show growth were, Lerner's (1937) Absolutism of Moral Perspective, donating behavior, immanent justice and punishment. It is not surprising that punishment scores did not show relative growth because initially the control group was statistically significantly superior (t (65) 2.97, p = .004).

When comparing each classroom's pre-test scores with their own post test scores, the five experimental classes did not all grow to the same extent on all the same variables. Of the ten possible areas for growth, two classrooms grew on nine dimensions, one classroom grew on eight dimensions and two classrooms grew on five of the dimensions. The control group grew on only two dimensions. Since this design had no post test only group, the growth of the control group could be due to a combination of pre-test sensitization interacting with development. These results can be seen in table two.

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insert table 2 here

There was very little interrelationship of pre-test measures. Of the 28 possible non-redundant correlations, only 4 proved high enough to be significant at the .10 level. After the educational intervention, however, and even though the actual correlations and their significance levels were still quite low, many more relationships emerged. Now 14 of the 28 possible non-redundant correlations reached the .10 level of significance and 12 of these at or beyond the .05 level. These results can be seen in table 3.

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insert table 3 here

Several demographic variables (sex, age, IQ, SES, ordinal position in the family, and peer popularity) were analyzed to see what, if any, relation they demonstrated with pre or post test measures. Initially, there were no significant sex differences. Post testing revealed that girls scored higher than boys on Damon's positive justice interview, a stage measure ($r = .28$, $p = .04$) and Lerner's Absolutism of moral perspective task ($x^2 = 8.97$, $p = .01$).

Although initially peer popularity did not correlate to any significant degree with any of the pre-test measures, two post test correlations were significant: Combined role taking ($r = .20$, $p = .04$) and combined morality measure ($r = .20$, $p = .04$).

There were several correlations of IQ with pre and post test measure. Most of them, however, are at low or modest levels. These relationships may be seen in table 4.

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insert table 4 here

Analysis of the intellectually "gifted" group (discovered ex post facto) revealed that they also tended to be the youngest of the sample, with an age range of only 10 months (80 to 90 months, $\bar{x} = 85$), as compared with the range of the total group (79 to 103 months, $\bar{x} = 88$). Their IQ's were also in a more constricted range (119 to 138, $\bar{x} = 127$), as compared with the total sample (85 to 136, $\bar{x} = 115$). Although analysis of variance did not reveal any statistically significant pre or post test differences for this "gifted" classroom, two findings are of interest.

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insert table 5 here

As can be seen from table 5, these children did not grow as much on the "punishment" variable as did the children of low or average IQ. That is, although at pre-testing they scored similarly to the low IQ group, after the intervention (which showed the low and average IQ groups making considerable growth), the gifted group remained relatively static. The gifted group donated less candy, both at pre and post testing than did any other classroom. As can be seen from the table, negative correlations exist between donating and IQ at pre-testing ($r = -.23$, $p = .03$) and post testing ($r = -.21$, $p = .03$). However, some of this effect may

be due to age differences, as the gifted group was also the youngest for the sample as a whole, and age was positively associated with generosity ($x^2 = 6.03$, $p = .04$). A comparison of means for all variables for both gifted and total groups can be seen in table 6.

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insert table 6 here

Although SES for this sample is somewhat homogeneous in that it is a strongly middle to upper class district, a continuum does exist and some SES effects were found. SES was positively correlated with post test scores on both role taking paradigm 1 ($r = .28$, $p = .01$) and role taking paradigm 2 ($r = .30$, $p = .01$), but there was no significant correlation for this sample between SES and any of the other moral dimensions studied.

The results of analysis or ordinal position in family as it relates to morality indicate that the latter born child scored relatively lower than earlier born children on the following post test measures: combined role taking ($r = -.19$, $p = .05$), punishment ($r = -.19$, $p = .05$), positive justice ($r = -.21$, $p = .03$), and donating ($r = -.37$, $p = .001$).

Discussion

The educational intervention was able to induce growth, relative to the control group, in several areas of morality -- i. e., role taking, intentionality, positive justice and the combined morality measure. The results as regards growth in the intentionality variable are consistent with those of Selman (1975). However, in contrast to growth on the

relatively discreet variable of intentionality, growth also occurred on the relatively broad stage measure of Damon (1975).

One is then left with the question of why not growth in the other areas of punishment, immanent justice, Lerner's task, and donating behavior?

Since the control group scored significantly higher on the punishment variable than the experimental group initially, it is not surprising that the experimental groups, when contrasted with the control, would not show relative growth. (Analysis of covariance for repeated measures was not available on the SPSS statistical package) Also, it will be recalled that IQ tended to exert an effect here (Table 5).

It would also seem that a child's prosocial behavior lags behind his moral judgments, a finding consistent with some past research (Solomon et al, 1972; Bryan and Walbek (1970)

Although several teachers indicated that they saw differences in the children's cognitive behavior after exposure to this intervention, they felt that children's actual behavior was not affected by this intervention. An area of further study may be a program designed to elicit behavioral growth in prosocial development. Perhaps it is time that someone take Lickona's (1976, p. 17) admonition to develop a longitudinal study of moral behavioral landmark achievements, akin to Kohlberg's moral judgment landmark achievements, seriously.

Since the girls grew to a greater degree than the boys on Lerner's task, it could be that since this task involves adult view

versus child view, and that since the central child "offenders" were male, and the adults in the story were both females, that a compounded sex difference is operating here. Perhaps a design in which the culprits were female and the adults were male would shed further light on this finding.

This educational intervention, in addition to inducing growth relative to a control group on several rather discrete variables, has also shown itself to have an enhancing or consolidating effect on the mental structure of the child in the realm of morality. The child, whose initial scores on variables previously shown to have some relation to moral maturity, exhibited quite a bit of scatter. After the intervention, that child is more likely to score in a more predictable and consistent manner.

Although the Bias Index of Snyder and Feldman (1977) was not in print until after the present research had been completed, it might prove to be a most enlightening concept for multidimensional analysis of growth as it relates to structure. A reanalysis of the present data using the concept of positive or negative skew or bias of pre and post test results might show that growth curves in the moral sphere parallel growth curves in the cognitive sphere. Snyder and Feldman investigated the effect of internal and external disequilibrium on developmental change. They hypothesized that children at transitional stages would show relatively greater level mixture and thus would be more amenable to growth when exposed to external disequilibrium. Their bias Index distinguished the children moving more solidly into

their current modal level from those moving out of a present modal level toward a higher developmental level, evidence for consolidation and elaboration following cognitive intervention.

The findings concerning the demographic variable of ordinal position in family can be seen to support Whelan's (1977) findings that first born children, when compared with later born children, expected their parents to support their moral choice, whereas later born children did not anticipate as great a degree of parental support for a moral choice which went counter to authority figures. This finding could help to explain why later born children did not profit from intervention to the extent that earlier born children did. It could be that if one does not anticipate parental support for a morally mature response, that there is less incentive to become morally mature.

The peer popularity results can in some way be seen in contrast to those of Porteus and Johnson (1965) who found no relationship between peer popularity and a combined measure of intentionality, immanent justice, and severity of punishment. It was precisely on the combined post test measures where a low but positive relationship was found between peer popularity and moral maturity; however, this was not the case for pre-test scores. It could be that the small group format of the intervention was a salient feature for moral growth of the more popular children.

Further research needs to be done using school districts with greater heterogeneity of IQ and socioeconomic status, as correlational

results tend to be suppressed as range or variability decrease as regards IQ. The results seem to indicate that with few exceptions, for this sample, which is predominantly above average in IQ but which had within it a classroom of superior intelligence, having a superior IQ did not induce children to score much differently from their more average peers. Perhaps this research paradigm could be extended through the middle elementary years since the program is recommended for grades 2 through 5. In addition, since this program was able to induce some growth on a stage measure, perhaps the new materials developed by Kohlberg and his associates (such as Values in a democracy and Selman's role taking filmstrips aimed at a junior high audience) could be assessed using Kohlberg's Interview, since it would be appropriate for children 12 years of age and older.

Perhaps a developmentally appropriate educational intervention can effect growth and enhance structure in a broad stage measure in other age groups. This may indeed prove to be the case since Kohlberg (1969) reports greater stage unity on his dilemmas than is found when using Piaget's stories.

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Table 1

Post Test Comparisons of Experimental and Control Groups

Variable	df	t	p
Role taking paradigm 2	65	2.21	.03
*Role taking paradigms 1&2 combined	65	2.37	.02
Positive Justice	65	2.23	.02
Intentionality	65	2.58	.01
*Combined measure	65	2.50	.01

Since the role taking paradigms had scores that could assume only a limited number of categories (thus having the effect of possible obscuring growth) scores on both paradigms were then combined and treated as one, for purpose of statistical analysis. Following the same reasoning, all the scores that a child earned from various pre-test measure of moral development were combined into one central measure of moral development for purposes of statistical analysis to ascertain "general or over all" moral growth.

Table 2

Results of Statistically Significant Pre and Post Test Comparisons for Individual Classrooms

Variable	Number of Classrooms showing statistically significant growth
Role taking Paradigm 1	5 experimental **
Total role taking	5 experimental *** 1 control *
Combined Morality Measure	5 experimental ***
Intentionality	4 experimental *
Immanent Justice	" " *
Role taking paradigm 2	" " **
Positive Justice	" " *
Punishment	2 experimental *
Absolutism of moral perspective	1 experimental * 1 control *
Donating/Behavioral measure	none

* p=.05

** p=.01

*** p=.001

Table 3

Relationships Among Variables

Before Educational Intervention

Variables	r	p
Role-Taking 1 with Intentionality	.15	.09
Role-Taking 1 with Immanent Justice	.23	.02
Role-Taking 2 with Absolutism of Moral Perspective	.15	.09
Punishment with Intentionality	.15	.09

Table 3 Continued

Relationships Among Variables

After Educational Intervention

Variables	r	p
Post Sharing with Post Role-Taking 1	.24	.03
" " " Post Role-Taking 2	.18	.07
" " " Post Immanent Justice	-.23	.03
" " " Absolutism of Moral Perspective	.18	.07
" " " Post Punishment	.16	.10
" " " Post Intentionality	.22	.03
Post Role-Taking 1 with Post Role-Taking 2	.23	.02
" " " " " Post Punishment	.26	.02
" " " " " Post Intentionality	.20	.05
Post Role-Taking 2 with Post Positive Justice	.20	.04
" " " " " Post Punishment	.23	.03
" " " " " Post Intentionality	.37	.02
Post Positive Justice with Intentionality	.22	.02
Post Punishment with Post Intentionality	.26	.02

Table 4

Variables Correlated with IQ

Variable	r	p
Demographic Variables		
School	.24	.02
SES	.21	.03
Age	-.22	.03
Moral (Pretest) Variables		
Intentionality	.21	.03
Absolutism of Moral Perspective	.43	.001
Combined Morality Measure	.27	.01
Donating	-.23	.03
Moral (Posttest) Variables		
Intentioality	.25	.01
Punishment	.26	.01
Absolutism of Perspective	.22	.03
Positive Justice	.21	.03
Role-Taking 2	.29	.01
Total Role-Taking	.33	.002
Post Combined Morality	.19	.05
Donating	-.21	.03

Table 5A

Pretest Punishment Results

IQ	Category 1 (least mature judgment)	Category 2	Category 3 (most mature judgment)
80-100	18%	58%	24%
101-115	60%	40%	0%
116-138	18%	54%	28%

Table 5B

Posttest Punishment Results

IQ	Category 1 (least mature judgment)	Category 2	Category 3 (most mature judgment)
80-100	12%	23%	65%
101-115	5%	40%	55%
116-138	14%	50%	36%

Table 6

Pre and Post Test Means for All Variables

For Both Gifted and Total Group

	Pre Test Means		Post Test Means	
Variable	Gifted	Total Gr.	Gifted	Total Gr.
Intentionality	2.83	2.52	3.5	3.26
Absolutism of Moral Perspective	3,08	2.85	3.00	3.05
Immanent Justice	3.00	3.21	3.91	3.93
Roletaking 1	1.25	1.43	1.58	1.81
Roletaking 2	1.66	1.59	2.83	2.49
Roletaking Combined	1.83	1.93	3.41	3.29
Punishment	4.41	4.43	5.00	5.38
Positive Justice	3.58	3.36	3.83	3.67
Combined Measure	25.66	25.18	29.66	29.54
M. & M.'s Donated	2.45	3.90	3.50	4.01